The competition that isn't: Adult vs. embryonic stem cells

Posted: August 4, 2010

Created: 04/08/2010 - 10:28

The past few days have sent the blogosphere -- especially the anti-embryonic stem cell blogosphere -- abuzz over a story by the Associated Press with the headline "Adult Stem Cell Research Far Ahead of Embryonic."

It's true. At this time there are many adult stem cell trials and only one embryonic stem cell trial underway. But what the story makes clear, if you read past the headline, is that adult stem cells were first out of the gate and are therefore first to trial. The story does highlight several of the exciting applications of adult stem cells. What it doesn't do is suggest that embryonic stem cells aren't of value.

Consider this: Irv Weissman of Stanford University (and multiple CIRM grantee) discovered the first adult stem cells in the bone marrow of mice in 1988. Ten years later, James Thomson of the University of Wisconsin created the first human embryonic stem cells.

With that timeline in mind, the AP story quotes Hank Greely, Stanford law professor and long-time follower of stem cell research, as saying:

> "Give it another five years and I'll be surprised if we don't have some substantial progress" beyond the initial safety studies of embryonic stem cell research.

CIRM funds both adult and embryonic stem cell research. That's because at this stage of the research it's too early to know which cells will be the best therapeutic option for different diseases and conditions. In fact, many of the very people leading adult stem cell trials (including Weissman) advocate also pursuing embryonic stem cell research and have signed an open letter endorsing all forms of stem cell research.

Those who oppose embryonic stem cell research are quick to appoint the first stem cell discovered as the leader. But in this case first doesn't mean best, and we won't know which cell type is best for many years. In fact, the best cellular therapy may depend on the disease -- adult cells for one disease, embryonic for another, and small molecules discovered through stem cell research for still other diseases.

At CIRM, we're excited about all potential therapies to end chronic disease and injury. Some of those therapies may come from adult stem cells. Others may come from embryonic stem cells or reprogrammed iPS cells. Whatever the origin of the cellular therapy, CIRM hopes that by funding all avenues of stem cell research we will push the field ever closer to the best therapies for disease and injury.

A.A.

Tags: Stanford University, Thomson, Weissman